# ATTACHMENT A

**Applied Metering Technologies, Inc.**
**Compliance With The Training Requirements**
**Of The Illinois Administrative Code**

**DOCKET NO. 05-0444: Hunt Power/Applied Metering Technologies**

**Training Compliance With Illinois Administrative Code Requirements**

*As of August 16, 2005*

| *Admin. Code Section* | *Requirement* | *AMT Training Compliance* |
|---|---|---|
| | **CLASS ONE** | |
| | Metering Types and Voltages. Workers with an MSP Class 1 Qualification are permitted to perform work on single-phase, socket-based meters, operating at a maximum of 120/240 volts or 120/208 volts. This level of qualification does not include transformer-rated meters. Also, connections of meter communications devices shall be outside of energized meter panels.<br><br>MSP Class 1 meter workers may install, remove and replace single-phase, 120/240 volt or 120/208 volt self-contained meters in standard socket-based metering installations. Connections for communication conductors shall be outside the energized meter panels. MSP Class 1 meter workers may be required to install jumpers on single-phase services where bypass provisions are provided or operate a manual bypass switch to maintain service continuity where applicable. | |
| 460.500(d) | An MSP employee shall be able to identify theft-of-service conditions and take appropriate action. | PQS and NWMS |
| 460.510(c)(1) | Knowledge of basic electrical theory and associated hazards and ability to perform work while avoiding hazards. | Entrance Exam, PQS and NWMS & EEI Handbook for Electricity Metering |
| 460.510(c)(2) | Knowledge of and ability to perform work in compliance with procedures and safety rules applicable to class of work performed, including: | |
| | A) Basic safety (e.g., driving hazards and animal bite prevention). | PQS, NWMS and OJT |
| | B) Electrical safety. | PQS, NWMS and OJT |
| | C) OSHA requirements. | OJT |
| | D) State requirements. | OJT |
| | E) Personal protective equipment. | PQS, NWMS and OJT |
| | F) Distribution safety procedures. | PQS, NWMS and OJT |
| 460.510(d)(1) | Knowledge of basic AC/DC electrical theory. | AMT Entrance Examination, OJT |
| 460.510(d)(2) | Knowledge of single-phase electrical metering. | PQS, NWMS and OJT NWMS & EEI Handbook for Electricity Metering |
| 460.510(d)(3) | Knowledge of electric distribution in general. | PQS, NWMS and OJT |
| 460.510(d)(4) | Knowledge of the meter panel and socket layout for the metering conditions of this class of meter work. | PQS, NWMS and OJT |

PQS = Applied Metering Technologies ("AMT") Personnel Qualifications Standards
NWMS = Northwest Meter School in Seattle Washington, 1-week sessions per year.
OJT = On The Job Training

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| 460.510(d)(5) | Ability to identify energy diversion or tampering related to this class of meter work. | PQS, NWMS |
| 460.510(d)(6) | Ability to install and remove damaged and undamaged meters. | NWMS and OJT |
| 460.510(d)(7) | Ability to read meters used in this class. | PQS, NWMS and OJT |
| 460.510(d)(8) | Ability to use tools appropriate to this class of work. | NWMS and OJT |
| 460.510(d)(9) | Ability to connect meter communications external to the meter panel. | PQS, NWMS, OJT and Formal Training Class |
| 460.510(d)(10) | Customer contact skills. | PQS and OJT |
| 460.510(d)(11) | Ability to distinguish between single-phase and poly-phase services. | PQS, NWMS and OJT |
| 460.510(d)(12) | Knowledge of DSP construction standards and local inspection authority requirements. | OJT |
| 460.510(d)(13) | Ability to safely jumper single-phase meter sockets to maintain service continuity. | NWMS and OJT |
| 460.510(e)(2) | A minimum of 500 hours on the job training with a Class 1 meter worker (with at least 1 year of experience as a Class 1 meter worker) or with a meter worker with a higher classification and successful completion of the MSP classroom training program. | OJT |

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| | **CLASS 2** | |
| | Workers with an MSP Class 2 Qualification are permitted to perform work on all Class 1 meter types, as well as: (1) All self-contained and instrument rated meters less than 600 volts; (2) Accuracy testing of all self-contained meters (field); (3) A-Base meters less than 600 volts; (4) K-Base meters; (5) Communication hook up; and 6) Meters with communication wiring routed inside the panel (work can be in and around energized circuits).<br><br>A Class 2 meter worker may work in and around energized circuits, as permitted by the procedures and safety rules of the certificated MSP.<br><br>In addition to performing the work of a Class 1 meter worker, a Class 2 meter worker may install, remove and replace poly-phase, under 600 volts, self-contained meters in safety socket and standard socket-based metering equipment. A Class 2 worker may operate test-bypass facilities in self-contained safety sockets and install communication wiring inside the panel. A Class 2 worker may be required to install jumpers on services where bypass provisions are provided or operate a manual bypass switch to maintain service continuity where applicable. On panels without bypass provisions or test-bypass facilities, a Class 2 worker may not remove or install poly-phase meters without first disconnecting the customer load.<br><br>A Class 2 meter worker may install, remove and replace all meters consistent with subsection 460.520(b), including transformer-rated meters less than 600 volts.<br><br>A Class 2 meter worker may operate test switches, but may not install, alter, maintain or replace wiring between the meter, test switch, test block and associated equipment. | |
| 460.520(c)(1) | All of the safety skills required for Class 1 meter workers. | PQS, NWMS and OJT |
| 460.520(2) | Electrical safety knowledge and work skills appropriate for three-phase metering up to 600 volt phase-to-phase, including the ability to identify and refer to a Class 3 meter installer services above 600 volt phase-to-phase prior to performing work in the service equipment, or if voltage rating is not labeled, at the time of initial voltage check. | PQS, NWMS and OJT |
| 460.520(c)(3) | Ability to operate test-bypass facilities or test blocks in a self-contained safety socket. | PQS, NWMS and OJT |

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| 460.520(c)(4) | Ability to install jumpers on services where bypass provisions are provided or operate a manual bypass switch to maintain service continuity where applicable. | PQS, NWMS and OJT |
| 460.520(d)(1) | All of the essential technical skills required for Class 1 meter workers; | PQS, NWMS and OJT |
| 460.520(d)(2) | Knowledge needed for up to 600 volt poly-phase service and the forms and voltages applicable to Class 2 meter work; | PQS, NWMS, OJT & EEI Handbook for Electricity Metering |
| 460.520(d)(3) | Ability to route communication wiring to accommodate meter communications | PQS, NWMS, OJT & Formal Training Class |
| 460.520(d)(4) | Ability to understand, interpret, identify and take appropriate actions based upon built-in diagnostics of solid state meters | PQS, NWMS & Training by Various Meter Manufacturers |
| 460.520(d)(5) | Ability to perform phase rotation assessments | NWMS and OJT |
| 460.520(d)(6) | Ability to work with transformer-rated meters and operate test switches and test blocks | PQS, NWMS and OJT |
| 460.520(d)(7) | Ability to install jumpers on services where bypass provisions are provided or operate a manual bypass switch to maintain service continuity where applicable | PQS, NWMS and OJT |
| 460.520(d)(8) | Ability to test self-contained meters in locations other than in the meter socket using semi-automatic meter test equipment (field test). | NWMS and OJT |
| 460.520(e)(2) | Minimum of one year experience as a Class 1 meter worker, 4000 hours on the job training with a Class 2 meter worker (with at least 1 year of experience as a Class 2 meter worker) or a meter worker with a higher classification, and successful completion of the MSP classroom training program. | OJT |

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| | **CLASS 3** | |
| | Metering Types of Voltages. Workers with an MSP Class 3 Qualification are permitted to perform work on all meter types applicable to Classes 1 and 2 meter workers. Class 3 work also includes: (1) Metering up to 600 volts, with transformer-rated meters and with primary and secondary voltages less than 600 volts; (2) Metering systems with instrument transformer primary side voltages over 600 volts; (3) Metering systems with communication wiring behind the panel (work can be in and around energized circuits); (4) Switchboard (panel mounted) meters; (5) All accuracy testing (field); (6) All programming; and (7) Circuit analysis.<br><br>A Class 3 meter worker may work in and around energized circuits, as permitted by the procedures and safety rules of the certificated MSP. In addition to performing Class 1 and 2 meter work, a Class 3 meter worker may install, remove and replace meters consistent with the description provided in subsection 460.530(a). A Class 3 meter worker may operate test switches and test blocks, perform in-field meter accuracy tests and calibrations, and perform all types of meter maintenance and troubleshooting. A Class 3 meter worker may program and verify internal programs and software in solid state meters. | |
| 460.530(c)(1) | All of the safety skills required for Class 1 and Class 2 meter workers. | PQS, NWMS and OJT |
| 460.530(c)(2) | Ability to conform processes to additional electricity hazards, unique customer environments, and complexities associated with metering switchboards, testing meters and maintaining meters. | PQS, NWMS and OJT |
| 460.530(d)(1) | All of the essential technical skills required for Class 1 and Class 2 meter workers | PQS, NWMS and OJT |
| 460.530(c)(2) | Ability to perform work on metering switchboards | NWMS and OJT |
| 460.530(d)(3) | Knowledge of the operating characteristics of metering transformers and the ability to operate test switches and test blocks | PQS, NWMS and OJT & EEI Handbook for Electricity Metering |
| 460.530(d)(4) | Ability to perform calibration, repair, retrofit, troubleshooting, and data collection from electric meters | PQS, NWMS and OJT |
| 460.530(d)(5) | Ability to install, maintain and program advanced metering technologies, including time-of-use meters, interval meters, real time pricing, remote meter communication, and load control devices | PQS, NWMS and OJT |

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| 460.530(e)(2) | Minimum of one year experience as a Class 2 meter worker, 2000 hours of on the job training with a Class 3 meter worker (with at least 1 year of experience as a Class 3 meter worker), and successful completion of the MSP classroom training program | NWMS and OJT |
| 460.530(g) | Continuing Education. A Class 3 meter worker shall participate annually in at least 12 hours of continuing education. The content of this training shall be determined by the certificated MSP and shall address standards of practice and related safety issues | Various Meter Manufacturers and Meter Test Equipment Manufacturers |

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